



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/786,174   | 02/26/2004  | Hermann Haaga        | 029384.53187US      | 9143             |
| 23911  | 7590        | 02/08/2007           | EXAMINER            |                  |
| CROWELL & MORING LLP<br>INTELLECTUAL PROPERTY GROUP<br>P.O. BOX 14300<br>WASHINGTON, DC 20044-4300 |             |                      | KARLS, SHAY LYNN    |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 1744                |                  |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 02/08/2007 | PAPER         |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                           |                     |
|------------------------------|---------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b>    | <b>Applicant(s)</b> |
|                              | 10/786,174                | HAAGA, HERMANN      |
|                              | Examiner<br>Shay L. Karls | Art Unit<br>1744    |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 January 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3, 5, 7-8, 10, 12-13, 15 and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Haaga (USPN 5896611).**

With regards to claims 1, 17, 20 and 21, Haaga teaches a hand-operated sweeping machine having two circular brooms (11, 12) that are mounted in the front area of the sweeping machine. The brooms are driven to rotate in opposite directions with a motor drive (col. 7, lines 13-22), wherein in addition to the motor drive for the brooms there is also a driving means to transfer driving forces derived from forward motion of the sweeping machine to the circular brooms (col. 4, lines 64-67) and means for automatically interrupting a connection between the motor drive and the driving means (a power switch for turning the power on and off allows the broom to be switched alternatively from an electric broom to a manual broom).

With regards to claims 3 and 18, there is an overriding coupling which allows the broom to run ahead of the driving means and is situated between the driving means and the brooms (col. 5, lines 59-67 and col. 6, lines 1-13).

With regards to claims 5 and 7, given that a motor drive can be used in addition to the driving mean and an overriding coupling already exists between the driving means and the

broom, it can be rationalized that an overriding coupling would also be located between the brooms and motor drive.

With regards to claims 8, 10 and 12 the overriding coupling is designed as a freewheeling coupling (col. 5, lines 66-67, col. 6, lines 1-3).

With regards to claims 13 and 15, the means for interrupting a drive connection between the circular brooms and the motor drive include an overriding coupling, which responds when the broom is turning more rapidly than the motor drive (col. 6, lines 3-13).

With regards to claim 19, the means for interruption are held electrically in an engaged position so that the brooms are not allowed to rotate in opposite directions. Thus the brooms are engaged to only rotate in one direction and the interruption mechanism prevents the brooms from spinning in an opposite direction.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2, 4, 6, 9, 11, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haaga ('611).**

Haaga teaches all the essential elements of the claimed invention as stated above, however fails to teach that there are separate motors provided for each broom (claim 2). The specification teaches separate drive means for each broom (col. 5, lines 22-54) and teaches using a motor to drive the brooms (col. 7, lines 13-22) however it is unclear if each broom has a

separate motor. It would have been obvious to modify Haaga so that each broom has a separate motor since duplicating parts for a multiple effect is a modification that has been considered to be within the level of ordinary skill in the art. *In re Harza* 124 USPQ 378, 380. Additionally, having a separate motor for each broom would allow the user to adjust the speed of each broom individually, so that they can rotate at different speeds or so that one can operate by the motor and the other could operate by the driving means.

**Claims 1-2, 17, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kress (PGPub 2003/0028982) in view of Yacobi (USPN 6918155).**

With regards to claims 1, 17, 20 and 21, Kress teaches a hand-operated sweeping machine having two circular brooms (14 figure 3, shows two broom next to each other) that are mounted in the front area of the sweeping machine. The brooms have a circular cross-section and therefore they are considered to be circular. There is a motor drive and additionally a driving means to transfer driving forces derived from forward motion of the sweeping machine to the circular brooms ([0007]) and means for automatically interrupting a connection between the motor drive and the driving means (a power switch for turning the power on and off allows the broom to be switched alternatively from an electric broom to a manual broom).

With regards to claim 19, the means for interruption are held electrically in an engaged position so that the brooms are not allowed to rotate in opposite directions. Thus the brooms are engaged to only rotate in one direction and the interruption mechanism prevents the brooms from spinning in an opposite direction.

Kress teaches all the essential elements of the claimed invention however fails to teach that the brooms rotate in opposite directions (claims 1, 17, 20 and 21) and that there are separate

Art Unit: 1744

motors for each broom (claim 2). Yacobi teaches a sweeping machine comprising two brooms each rotating in opposite directions. This eliminated any tendency of the brooms to push or pull the floor cleaning apparatus across the floor during operation. Thus the apparatus is easier to manipulate and move where the operator desires (col. 4, lines 35-43). It would have been obvious to modify Kress so that the brooms rotate in opposite directions as taught by Yacobi so that the sweeping machine is easier to manipulate.

Additionally, with regards to claim 2, it would have been obvious to modify Kress so that each broom has a separate motor since duplicating parts for a multiple effect is a modification that has been considered to be within the level of ordinary skill in the art. *In re Harza* 124 USPQ 378, 380. Additionally, having a separate motor for each broom would allow the user to adjust the speed of each broom individually, so that they can rotate at different speeds or so that one can operate by the motor and the other could operate by the driving means.

***Response to Arguments***

The applicant argues that Haaga does not teach driving the circular brooms with the wheels 31 and 31'. The examiner agrees with this argument and thus is modifying the rejection. Haaga teaches that the circular brooms are driven by rollers 19 (col. 4, lines 64-67). The rollers drive the brooms without the use of a motor. Additionally, the reference teaches that the circular brooms and the cylindrical broom can be rotated by means of an electrical motor (col. 7, lines 13-15). Therefore the reference teaches a broom that has brushes capable of being rotated manually or electrically.

The applicant further argues that Haaga does not teach a means for automatically interrupting a connection between the motor drive and the driving means since there is no teaching

Art Unit: 1744

of a connection between the wheel drive for the cylindrical broom with the drive for the circular brooms. The examiner notes that the applicant is correct in this argument however the examiner has modified the rejection so that the drive means for the circular brush is the rollers 19 and not the wheels 31 and 31'. The applicant also argues that there is no suggestion that the various alternative driving means are simultaneously used (that the manual and electrical brooms are on the same embodiment). The examiner would like to point out that column 7 lines 13-21 teach a modified embodiment in which there is an electrical motor driving the brushes. The language "modified embodiment" leads one of skill in the art to assume that the manual broom is being modified with an electrical motor. Therefore, it would be capable of operating both ways since the manual broom is just being modified with an electrical motor. Additionally, the language states that the cylinder broom and, if necessary the circular brooms may be electrically motor-driven. Since there is an option to have just one or both brushes be electrically driven it is understood that both the brushes are capable of being manually or electrically driven. In conclusion, the automatic interruption between the motor drive and the driving means can be considered the power switch since turning the broom off will allow the device to be operated manually and the references teaches that the broom is capable of being manually driven or electrically driven.

The applicant further argues that Kress fails to teach circular brooms, however, the brooms of Kress are circular. Even though they are cylindrical, they have a circular cross-section and therefore can be considered circular. The applicant needs to clarify the language used to describe the shape of the brooms. For example, describe the brooms as being disc-shaped.

Art Unit: 1744

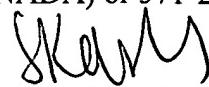
The applicant further argues that the power switch does not automatically interrupt a connection between the motor drive and the driving means. The examiner disagrees since once the power switch is turned off it turns off the electrical connection between the motor and brush which is interrupted and thus the broom can be used manually.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 7:00-4:30 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shay L Karls  
Patent Examiner  
Art Unit 1744